Oncogene (1992), **7**, 2563–2574

© Macmillan Press Ltd., 1992

Cumulative Contents

Volume 7, No. 1 January 1992

Mini Review

3 The *met* oncogene: from detection by transfection to transmembrane receptor for hepatocyte growth factor
Colin S. Cooper

9 c-*ets*-1 DNA binding to the PEA3 motif is differentially inhibited by all the mutations found in v-*ets*
Dominique Leprince, Pascale Crepieux & Dominique Stehelin

19 The E5 gene from human papillomavirus type 16 is an oncogene which enhances growth factor-mediated signal transduction to the nucleus
Pranee Leechanachai, Lawrence Banks, France Moreau & Greg Matlashewski

27 Human papillomavirus type 16 E5 gene stimulates the transforming activity of the epidermal growth factor receptor
D. Pim, M. Collins & L. Banks

33 Phosphorylation occurs in the amino terminus of the Raf-1 protein
Billy R. McGrew, David W. Nichols, Vincent P. Stanton Jr, Hong Cai, Robert C. Whorf, Vinus Patel, Geoffrey M. Cooper & Andrew P. Laudano

43 Variable pattern of *jun* and *fos* gene expression in different hematopoietic cell lines during interleukin 3-induced entry into the cell cycle
Robert L. Redner, Angel W.-M. Lee, Gail A. Osawa & Arthur W. Nienhuis

51 Loss of c-*kit* expression in cultured melanoma cells
N. Lassam & S. Bickford

57 Isolation of azatyrosine-induced revertants from *ras*-transformed human mammary epithelial cells
Natasha Kyprianou & Joyce Taylor-Papadimitriou

65 A divergent *ets*-related protein, Elk-1, recognizes similar c-*ets*-1 proto-oncogene target sequences and acts as a transcriptional activator
Veena N. Rao & E. Shyam P. Reddy

71 Temperature-sensitive mutants of p53 associated with human carcinoma of the lung
E.A. Medcalf, T. Takahashi, I. Chiba, J. Minna & J. Milner

77 Expression of genes encoding type IV collagen-degrading metalloproteinases and tissue inhibitors of metalloproteinases in various human tumor cells
Hiroshi Sato, Yuri Kida, Masayoshi Mai, Yoshio Endo, Takuma Sasaki, Junji Tanaka & Motoharu Seiki

85 Inhibition of *in vitro* myogenic differentiation by a polyomavirus early function
R. Maione, G.M. Fimia & P. Amati

95 Cell type and developmental regulation of the *fyn* proto-oncogene in neural retina
Christine A. Ingraham, Michael P. Cooke, Yen-Ning Chuang, Roger M. Perlmutter & Patricia F. Maness

101 Cellular localization and T antigen binding of the retinoblastoma protein
Jiří Bártek, Bořivoj Vojtěšek, Roger J.A. Grand, Phillip H. Gallimore & David P. Lane

109 Transformation of normal rat kidney cells by v-K-*ras* enhances expression of transin 2 and an S-100-related calcium-binding protein
Michael W. De Vouge & Barid B. Mukherjee

121 Sustained induction of *egr*-1 by v-*src* correlates with a lack of Fos-mediated repression of the *erg*-1 promoter
Sajjad A. Qureshi, Myunghi Rim, Konstantina Alexandropoulos, Karen Berg, Vikas P. Sukhatme & David A. Foster

127 Expression of p53 in human neuroblastoma- and neuroepithelioma-derived cell lines
Andrew M. Davidoff, Jeffrey C. Pence, Nicholas A. Shorter, J. Dirk Iglehart & Jeffrey R. Marks

135 The immediate early gene response to a differentiative stimulus is disrupted by the v-*abl* and v-*ras* oncogenes
Brent L. Kreider & Giovanni Rovera

141 Retroviruses that express different *ras* mutants cause different types of tumors in chickens
Iris Givol, Jack J. Greenhouse, Stephen H. Hughes & Donald L. Ewert

147 Activation of the colony-stimulating factor 1 receptor leads to the rapid tyrosine phosphorylation of GTPase-activating protein and activation of cellular p21^{ras}
Mohammad A. Heidaran, Christopher J. Molloy, Michael Pangelinan, Goutam G. Choudhury, Ling-Mei Wang, Timothy P. Fleming, Alan Y. Sakaguchi & Jacalyn H. Pierce

153 The biochemical properties and transforming potential of human *Wnt*-2 are similar to *Wnt*-1
Andrew Blasband, Brian Schryver & Jackie Papkoff

163 Transcriptional activity of *rel* family proteins
Peter C. McDonnell, Sushant Kumar, Arnold B. Rabson & Céline Gélinas

171 *p53* gene mutations in non-small-cell lung cancer cell lines and their correlation with the presence of *ras* mutations and clinical features
Tetsuya Mitsudomi, Seth M. Steinberg, Marion M. Nau, David Carbone, Domenico D'Amico, Sara Bodner, Herbert K. Oie, R. Ilona Linnoila, James L. Mulshine, John D. Minna & Adi F. Gazdar

181 Overexpression of c-*met* proto-oncogene but not epidermal growth factor receptor or c-*erb*B-2 in primary human colorectal carcinomas
Chi Liu, Morag Park & Ming-Sound Tsao

187 cDNA sequence of a growth factor-inducible immediate early gene and characterization of its encoded protein
Catherine H. Charles, Andrew S. Abler & Lester F. Lau

Volume 7, No. 2 February 1992

193 Melittin resistance: a counterselection for *ras* transformation
Sreenath V. Sharma

203 The v-*erb*A oncogene requires cooperation with tyrosine kinases to arrest erythroid differentiation induced by ligand-activated endogenous c-*erb*A and retinoic acid receptors
Christian Schroeder, Leonie Gibson & Hartmut Beug

217 Modulation of normal erythroid differentiation by the endogenous thyroid hormone and retinoic acid receptors: a possible target for v-*erb*A oncogene action
Christian Schroeder, Leonie Gibson, Martin Zenke & Harmut Beug

229 Induction of *Xenopus* oocyte meiotic maturation by the *dbl* oncogene product
Grazia Graziani, Angel R. Nebreda, Shiv Srivastava, Eugenio Santos & Alessandra Eva

237 *TRK*-T1 is a novel oncogene formed by the fusion of *TPR* and *TRK* genes in human papillary thyroid carcinomas
A. Greco, M.A. Pierotti, I. Bongarzone, S. Pagliardini, C. Lanzi & G. Della Porta

243 Increased expression of genes from growth factor signalling pathways in glioblastoma cell lines
Abha Saxena & Iqbal Unnisa Ali

249 Two independent activation domains in c-Ets-1 and c-Ets-2 located in non-conserved sequences of the *ets* gene family
J. Schneikert, Y. Lutz & B. Wasylyk

257 Direct interaction of CREB protein with 21 bp tax-reponse elements of HTLV-I LTR
Peter Beimling & Karin Moelling

263 Prevalence of N-*ras* mutations in children with myelodysplastic syndromes and acute myeloid leukemia
Michael Lübbert, Joseph Mirro Jr, Geoffrey Kitchingman, Frank McCormick, Roland Mertelsmann, Friedhelm Herrmann & H. Phillip Koeffler

269 DNA methylation of coding and non-coding regions of the human H-*RAS* gene in normal and tumor tissues
Maria Grazia Borrello, Marco A. Pierotti, Elena Tamborini, Daniela Biassoni, Maria Grazia Rizzetti, Silvana Pilotti & Giuseppe Della Porta

277 Nerve growth factor induces rapid accumulation of the GTP-bound form of $p21^{ras}$ in rat pheochromocytoma PC12 cells
K. Muroya, S. Hattori & S. Nakamura

283 Alternate mechanisms of *ras* activation are complementary and favor formation of *ras*-GTP
Geeta Patel, Marsha J. MacDonald, Roya Khorsravi-Far, Mark Hisaka & Channing J. Der

289 Molecular cloning of the human cDNA for a stimulatory GDP/GTP exchange protein for c-Ki-*ras* p21 and *smg* p21
Akira Kikuchi, Kozo Kaibuchi, Yuichi Hori, Hidetaro Nonaka, Tsuyoshi Sakoda, Motohiro Kawamura, Takakazu Mizuno & Yoshimi Takai

295 Early gene expression in lymphoma-associated hamster polyomavirus viral genomes
Véronique Delmas, Christophe de La Roche Saint André, Maryvonne Gardes, Laurence Goutebroze & Jean Feunteun

303 Human *hst*-2 (FGF-6) oncogene: cDNA cloning and characterization
Shinya Iida, Teruhiko Yoshida, Kenichiro Naito, Hiromi Sakamoto, Osamu Katoh, Setsuo Hirohashi, Takeyuki Sato, Masahiko Onda, Takashi Sugimura & Masaaki Terada

311 Molecular rearrangements of the *MYL* gene in acute promyelocytic leukemia (APL, M3) define a breakpoint cluster region as well as some molecular variants
Jian-Hua Tong, Shuo Dong, Jie-Ping Geng, Wei Huang, Zhen-Yi Wang, Guan-Lin Sun, Sai-Jaun Chen, Zhu Chen, Christian-Jacques Larsen & Roland Berger

317 The amino-terminal half of $pp59^{c\text{-}fyn}$ contains sequences necessary for formation of a 75 kDa form and also repressive elements absent in $pp60^{c\text{-}src}$
Pearl C. Espino, Wan-Yin Chou, Alan E. Smith & Seng H. Cheng

323 Induction of *smg* p21/*rap*1A p21/*krev*-1 p21 gene expression during the phorbol ester-induced differentiation of a human megakaryocytic leukemia cell line
Masahi Adachi, Ryukichi Ryo, Akinori Yoshida, Wataru Sugano, Mutsumi Yasunaga, Katsuyasu Saigo, Nobuo Yamaguchi, Takeyuki Sato, Kimihiko Sano, Kozo Kaibuchi & Yoshimi Takai

331 Oncogenic activation of murine *mos* protein kinase by DNA rearrangement of its N-terminal coding region
Tohru Ohuchi, Yoshihiro Kurita, Hitoshi Sasai, Jun Miyoshi, Taisei Nomura & Kumao Toyoshima

339 High frequency of somatically acquired p53 mutations in small-cell lung cancer lines and tumors
D.D'Amico, D. Carbone, T. Mitsudomi, M. Nau, J. Fedorko, E Russell, B. Johnson, D. Buchhagen, S. Bodner, R. Phelps, A. Gazdar & J.D. Minna

347 Activation of protein kinase C increases phosphorylation of the L-*myc* trans-activator domain at a GSK-3 target site
Kalle Saksela, Tomi P. Mäkelä, Kenneth Hughes, James R. Woodgett & Kari Alitalo

355 Identification and cloning of two overexpressed genes, U21B31/*PRAD*1 and *EMS*1, within the amplified chromosome 11q13 region in human carcinomas
Ed Schuuring, Els Verhoeven, Wolter J. Mooi & Rob J.A.M. Michalides

363 Role of c-*fos*-AP-1 binding sequence (FAP) in the induction of c-*fos* expression by purified C-kinase and in c-*fos* down-regulation following serum induction
Cécile Gauthier-Rouvière, Michèle Basset, Ned J.C. Lamb & Anne Fernandez

371 K252a is a selective inhibitor of the tyrosine protein kinase activity of the *trk* family of oncogenes and neurotrophin receptors
Peter Tapley, Fabienne Lamballe & Mariano Barbacid

383 Nucleotide sequence analysis of human *tpr* cDNA clones
Philip J. Mitchell & Colin S. Cooper

389 Association of a tyrosine kinase activity with GAP complexes in v-*src* transformed fibroblasts
Gijsbertus J. Pronk, Paul Polakis, Gail Wong, Alida M.M. de Vries-Smits, Johannes L. Bos & Frank McCormick

Volume 7, No. 3 March 1992

397 Identification of three essential regions of hepatitis B virus X protein for trans-activation function
Masayuki Arii, Shinako Takada & Katsuro Koike

405 Rearrangement and co-amplification of L-*myc* and *rlf* in primary lung cancer
Tomi P. Mäkelä, Masahiko Shiraishi, Maria G. Borrello, Takao Sekiya & Kari Alitalo

411 Three distinct elements within the murine c-*myc* promoter are required for transcription
Kenneth H. Moberg, Thomas J. Logan, W. Andrew Tyndall & David J. Hall

423 Co-purification of $p34^{cdc2}/p58^{cyclin\ A}$ proline-directed protein kinase and the retinoblastoma tumor susceptibility gene product: interaction of an oncogenic serine/threonine protein kinase with a tumor-suppressor protein
Richard T. Williams, Denise A. Carbonaro-Hall & Frederick L. Hall

433 Tax protein of human T-cell leukemia virus type I is required for maintenance of the transformed phenotype
Shoji Yamaoka, Takayoshi Tobe & Masakazu Hatanaka

439 Enhanced invasive properties of rat embryo fibroblasts transformed by adenovirus E1A mutants with deletions in the carboxy-terminal exon
Stig Linder, Przemyslaw Popowicz, Catharina Svensson, Heather Marshall, Maria Bondesson & Göran Akusjärvi

445 Three distinct regions involved in 3p deletion in human lung cancer
Kenji Hibi, Takashi Takahashi, Kazuhiro Yamakawa, Ryuzo Ueda, Yoshitaka Sekido, Yutaka Ariyoshi, Motokazu Suyama, Hiroshi Takagi, Yusuke Nakamura & Toshitada Takahashi

451 Alterations of the *p53* gene are common and critical events for the maintenance of malignant phenotypes in small-cell lung carcinoma
Yuichi Sameshima, Yoshihiro Matsuno, Setsuo Hirohashi, Yukio Shimosato, Hideaki Mizoguchi, Takashi Sugimura, Masaaki Terada & Jun Yokota

459 Lack of immortalizing activity of a human papillomavirus type 16 variant DNA with a mutation in the E2 gene isolated from normal human cervical keratinocytes
Alan Storey, Isobel Greenfield, Lawrence Banks, David Pim, Tim Crook, Lionel Crawford & Margaret Stanley

467 $p23^{rab2}$, a *ras*-like GTPase with a -GGGCC C-terminus, is isoprenylated but not detectably carboxymethylated in NIH3T3 cells
Chungwen Wei, Robert Lutz, Michael Sinensky & Ian G. Macara

475 A glutamic acid residue at position 31 of Ras protein is essential to the signal transduction for neurite outgrowth of PC12 cells and the stimulation of GTPase activity by GAP^{Ras}
Mikako Shirouzu, Junko Fujita-Yoshigaki, Yutaka Ito, Hiroshi Koide, Susumu Nishimura & Shigeyuki Yokoyama

481 Identification of neurofibromatosis type I gene product as an insoluble GTPase-activating protein toward *ras* p21
S. Hattori, M. Maekawa & S. Nakamura

487 Amplification and proviral activation of several *Wnt* genes during progression and clonal variation of mouse mammary tumors
Henk Roelink, Els Wagenaar & Roel Nusse

493 The physical interactions between $p37^{env-mos}$ and tubulin structures
Wenlong Bai, Balraj Singh, Yandan Yang, Louis S. Ramagli, Michael Nash, Norbert K. Herzog & Ralph B. Arlinghaus

501 Regulation fo the $p58^{GTA}$ cell division control-related protein kinase during phorbol 12-myristate 13-acetate-induced terminal differentiation of U937 cells
Andrew S. Kraft, Shan Shue Wang, Jialing Xiang, Lisa Pouncey & Vincent J. Kidd

507 Active LINE-1 retrotransposons in human testicular cancer
G.L. Bratthauer & T.G. Fanning

511 Surface expression of erbB-2 protein is post-transcriptionally regulated in mammary epithelial cells by epidermal growth factor and by the culture density
Elena S. Kornilova, Daniela Taverna, Wolfgang Hoeck & Nancy E. Hynes

521 Overexpression of H-*ras* oncogene induces resistance to the growth-inhibitory action of transforming growth factor beta-1 (TGF-β1) and alters the number and type of TGF-β1 receptors in rat intestinal epithelial cell clones
J. Filmus, J. Zhao & R.N. Buick

527 Identification of genes differentially expressed in two types of v-*myb*-transformed avian myelomonocytic cells
Toru Nakano & Thomas Graf

535 Transforming potential of truncated v-*myb* and stimulation of replication by *gag–myb* fusion products
A. Merzak, J. Soret, C. Martinerie, A. Sureau, J. Crochet & B. Perbal

543 Protein complexes bearing *myc*-like antigenicity recognize two distinct DNA sequences
Yoichi Negishi, Sanae M.M. Iguchi-Ariga & Hiroyoshi Ariga

549 The difference in p53 antioncogene transcription in human monocytes and lymphocytes
O.A. Osipovich, N.I. Misuno, T.S. Kolesnikova, A.B. Sudarikov & N.N. Voitenok

553 Antisense RNA to the putative tumor-suppressor gene DCC transforms Rat-1 fibroblasts
Ramaswamy Narayanan, Kenneth G. Lawler, Roel Q.J. Schaapveld, Kathleen R. Cho, Bert Vogelstein, Paul Bui-Vinh Tran, Michael P. Osborne & Nitin T. Telang

563 *Scc*-1, a novel colon cancer susceptibility gene in the mouse: linkage to *CD44* (*Ly*-24, *Pgp*-1) on chromosome 2
Corina J.A. Moen, Margriet Snoek, Augustinus A.M. Hart & Peter Demant

567 v-*rel* – and c-*rel* – protein complexes bind to the NK-κB site *in vitro*
T. Kochel & N.R. Rice

573 Cytogenetic 2; 18 and 18; 22 translocation in chronic lymphocytic leukemia with juxtaposition of *bcl*-2 and immunoglobulin light chain genes
Satoshi Tashiro, Miho Takechi, Hiroya Asou, Kastuhiko Takauchi, Taiichi Kyo, Hiroo Dohy, Masahiro Kikuchi, Nanao Kamada & Yoshihide Tsujimoto

579 Tyrosine phosphorylation of a 120 000 dalton membrane-associated protein by the neural form of $pp60^{c\text{-}src}$, $pp60^{c\text{-}src+}$
Daniel C. Flynn, Michael D. Schaller & J. Thomas Parsons

585 The products of the *mcf*-2 and *vav* proto-oncogenes and of the yeast gene *cdc*-24 share sequence similarities
Franck Galland, Shulamit Katzav & Daniel Birnbaum

589 The Myb DNA-binding domain is highly conserved in *Dictyostelium discoideum*
Ute Stober-Grässer, Barbara Brydolf, Xu Bin, Friedrich Grässer, Richard A. Firtel & Joseph S. Lipsick

597 The nuclear oncogenes v-*erb*A and v-*ets* cooperate in the induction of avian erythroleukemia
Thomas Metz & Thomas Graf

607 Errata

Volume 7, No. 4 April 1992

611 The hematopoietically expressed *vav* proto-oncogene shares homology with the *dbl* GDP–GTP exchange factor, the *bcr* gene and a yeast gene (*CDC24*) involved in cytoskeletal organization
Jerry M. Adams, Heather Houston, John Allen, Thierry Lints & Richard Harvey

619 Recombinant retroviruses encoding human papillomavirus type 18 E6 and E7 genes stimulate proliferation and delay differentiation of human keratinocytes early after infection
Craig D. Woodworth, Shinta Cheng, Scott Simpson, Lawrence Hamacher, Louise T. Chow, Thomas R. Broker & Joseph A. DiPaolo

627 Amplification of α-platelet-derived growth factor receptor gene lacking an exon coding for a portion of the extracellular region in a primary brain tumor of glial origin
Toshihiro Kumabe, Yoshiaki Sohma, Takamasa Kayama, Takashi Yoshimoto & Tokuo Yamamoto

635 Equivalent expression of paternally and maternally inherited *WT1* alleles in normal fetal tissue and Wilms' tumours
M.H. Little, R. Dunn, J. Byrne, A. Seawright, P.J. Smith, K. Pritchard-Jones, V. Van Heyningen & N.D. Hastsie

643 Friend murine leukaemia virus is integrated at a common site in most primary spleen tumours of erythroleukaemic animals
Franz T. Sels, Stefan Langer, Ansgar S. Schulz, Jonathan Silver, Marc Sitbon & Roland W. Friedrich

653 *SCL* is coexpressed with *GATA-1* in hemopoietic cells but is also expressed in developing brain
A.R. Green, T. Lints, J. Visvader, R. Harvey & C.G. Begley

661 Conformational analysis of p53 in resting and concanavalin A-stimulated mouse lymphocytes
Jörn Mosner & Wolfgang Deppert

667 Skeletal muscle arises as a late event during development of wound sarcomas in v-*jun* transgenic mice
Andre C. Schuh, Sarah J. Keating, Michael C. Yeung & Martin L. Breitman

677 Cloning and characterization of the mouse *neu* promoter
Margaret R.-A. White & Mien-Chie Hung

685 Genomic organization of the human c-*kit* gene: evolution of the receptor tyrosine kinase subclass III
Catherine André, Emmanuel Martin, François Cornu, Wei-Xin Hu, Xiao-Ping Wang & Francis Galibert

693 Regions controlling hyperphosphorylation and conformation of the retinoblastoma gene product are independent of domains required for transcriptional repression
Paul A. Hamel, R. Montgomery Gill, Robert A. Phillips & Brenda L. Gallie

703 Lipopolysaccharide- and interferon-gamma-induced expression of *hck* and *lyn* tyrosine kinases in murine bone marrow-derived macrophages
I. Boulet, S. Ralph, E. Stanley, P. Lock, A.R. Dunn, S.P. Green & W.A. Phillips

711 Cell type-specific expression and negative regulation by retinoic acid of the human N-*myc* promoter in neuroblastoma cells
Randal K. Wada, Robert C. Seeger, C. Patrick Reynolds, Thomas Alloggiamento, Joyce M. Yamashiro, Cristina Ruland, Alexander C. Black & Joseph D. Rosenblatt

719 Identification of distinct populations of PI-3 kinase activity following T-cell activation
Peter A. Thompson, J. Silvio Gutkind, Keith C. Robbins, Jeffrey A. Ledbetter & Joseph B. Bolen

727 Sustained expression of the *pim-1* kinase is specifically induced in myeloid cells by cytokines whose receptors are structurally related
Michael Lilly, Tiep Le, Paul Holland & Sidney L. Hendrickson

733 A novel transcriptional unit of the *tre* oncogene widely expressed in human cancer cells
Tatsuya Nakamura, Jana Hillova, Régine Mariage-Samson, Myriam Onno, Kay Huebner, Linda A. Cannizzaro, Leslie Boghosian-Sell, Carlo M. Croce & Miroslav Hill

743 Expression of mutant p53 proteins in lung cancer correlates with the class of p53 gene mutation
Sara M. Bodner, John D. Minna, Sandra M. Jensen, Domenico D'Amico, David Carbone, Tetsuya Mitsudomi, Joseph Fedorko, Dorothy L. Buchhagen, Marion M. Nau, Adi F. Gazdar & R. Ilona Linnoila

751 Amplification of 11q13 DNA sequences in human breast cancer: D11S97 identifies a region tightly linked to BCL1 which can be amplified separately
Pierre Szepetowski, Anouk Courseaux, Georges F. Carle, Charles Theillet & Patrick Gaudray

757 A rearrangement of the c-*cbl* proto-oncogene in HUT78 T-lymphoma cells results in a truncated protein
Timothy J. Blake & Wallace Y. Langdon

763 Inactivation of the remaining allele of the *WT1* gene in a Wilms' tumour from a WAGR patient
K.W. Brown, J.E. Watson, V. Poirier, M.G. Mott, P.J. Berry & N.J. Maitland

769 Stimulation of cell division and fibroblast focus formation by antisense repression of retinoblastoma protein synthesis
M. Strauss, S. Hering, A. Lieber, G. Herrmann, B.E. Griffin & W. Arnold

775 *max* encodes a sequence-specific DNA-binding protein and is not regulated by serum growth factors
Steven Berberich, Nancy Hyde-DeRuyscher, Peter Espenshade & Michael Cole

781 Nucleotide sequence polymorphism in a hotspot mutation region of the p53 gene
Georges-Raoul Mazars, Philippe Jeanteur, Henry T. Lynch, Gilbert Lenoir & Charles Theillet

783 The retinoblastoma protein is partially phosphorylated during early G_1 in cycling cells but not in G_1 cells arrested with α-interferon
Lindsey C. Burke, Alison Bybee & N. Shaun B. Thomas

789 Chromosomal localization of human p85α, a subunit of phosphatidylinositol 3-kinase, and its homologue p85β
S. Volinia, P. Patracchini, M. Otsu, I. Hiles, I. Gout, E. Calzolari, F. Bernardi, L. Rooke & M.D. Waterfield

795 B-*raf* and a B-*raf* pseudogene are located on 7q in man
Gunamani Sithanandam, Teresa Druck, Linda A. Cannizzaro, Grace Leuzzi, Kay Huebner & Ulf R. Rapp

801 Transforming growth factor β1 (TGF-β1) inhibits retinoblastoma gene expression but not pRB phosphorylation in TGF-β1-growth stimulated colon carcinoma cells
Zhongfa Yan, Stephen Hsu, Sidney Winawer & Eileen Friedman

807 Multiple amplicons of discrete sizes encompassing N-*myc* in neuroblastoma cells evolve through differential recombination from a large precursor DNA
Lukas C. Amler & Manfred Schwab

811 A retrovirus that expresses v-*abl* and c-*myc* oncogenes rapidly induces plasmacytomas
David A. Largaespada, Donal A. Kaehler, Harald Mishak, Eva Weissinger, Michael Potter, J. Frederic Mushinski & Rex Risser

821 Erratum
Neel et al.

823 Corrigendum
Givol *et al.*

Volume 7, No. 5 May 1992

827 The severe combined immunodeficient mouse as a model for human myeloid leukemias
Alessandra Cesano, James A. Hoxie, Beverly Lange, Peter C. Nowell, Jane Bishop & Daniela Santoli

837 Intracistronic complementation reveals a new function of SV40 T antigen that co-operates with Rb and p53 binding to stimulate DNA synthesis in quiescent cells
Matthias Dobbelstein, Avril K. Arthur, Silke Dehde, Karen van Zee, Achim Dickmanns & Ellen Fanning

849 Human protein–tyrosine kinase gene *HCK*: expression and structural analysis of the promoter region
Ursula Lichtenberg, Nancy Quintrell & J. Michael Bishop

859 Inhibition of Fos- and Ras-induced transformation by mutant Fos proteins with structural alterations in functionally different domains
Maresa Wick, Frances C. Lucibello & Rolf Müller

869 *Bcl*-2 confers growth and survival advantage to interleukin 7-dependent early pre-B cells which become factor-independent by a multistep process in culture
Gary V. Borzillo, Koichi Endo & Yoshihide Tsujimoto

877 Characterization of the 5′ untranslated region of the human c-*fgr* gene and identification of the major myelomonocytic c-*fgr* promoter
Daniel C. Link, Silvio J. Gutkind, Keith C. Robbins & Timothy J. Ley

885 Oncogene-mediated transformation of fetal rat colon *in vitro*
S. Pories, K. Jaros, G. Steele Jr, A. Pauley & I.C. Summerhayes

895 Characterization of a class 3 tyrosine kinase
O.M. Zack Howard, Michael Dean, Howard Young, Mark Ramsburg, Jim A. Turpin, Dennis F. Michiel, David J. Kelvin, Leo Lee & William L. Farrar

901 c-*myb* effects on kinetic events during MEL cell differentiation
Rizwan Danish, Omayma El-Awar, Barbara L. Weber, John Langmore, Laurence A. Turka, James J. Ryan & Michael F. Clarke

909 Phosphorylation of the retinoblastoma protein is modulated in mouse kidney cells infected with polyomavirus
Edward W. Khandjian & Sandra Tremblay

919 Amplification and rearrangement of *melF*/mouse CD43 (leukosialin) gene encoding a highly glycosylated membrane protein gp120 in Friend erythroleukemia cells
Yukiko Misawa & Masabumi Shibuya

927 Most human squamous cell carcinomas in the oral cavity contain mutated p53 tumor-suppressor genes
Eiki Sakai & Nobuo Tsuchida

935 p53 mutations in spontaneously immortalized 3T12 but not 3T3 mouse embryo cells
Susan R. Rittling & David T. Denhardt

943 Expression of truncated transcripts of the proto-oncogene c-*fps/fes* in human lymphoma and lymphoid leukemia cell lines
M. Jücker, A.J.M. Roebroek, J. Mautner, K. Koch, D. Eick, V. Diehl, W.J.M. Van de Ven & H. Tesch

953 V-*erb*A and c-*erb*A proteins enhance transcriptional activation by c-*jun*
Mohammed Sharif & Martin L. Privalsky

961 Molecular cloning and characterization of the t(2;14) translocation associated with childhood chronic lymphocytic leukemia
Andrea L. Richardson, Caroline G. Humphries & Philip W. Tucker

971 Regulation of the enzymatic function of the lymphocyte-specific tyrosine protein kinase $p56^{lck}$ by the non-catalytic SH2 and SH3 domains
André Veillette, Lorraine Caron, Marielle Fournel & Tony Pawson

981 Retroviral infection accelerates T lymphomagenesis in Eμ–N-*ras* transgenic mice by activating c-*myc* or N-*myc*
Y. Haupt, A.W. Harris & J.M. Adams

987 Detection of both mutant and wild-type p53 protein in normal skin fibroblasts and demonstration of a shared 'second hit' on p53 in diverse tumors from a cancer-prone family with Li–Fraumeni syndrome
Shiv Srivastava, Yue A. Tong, Krishnakumar Devadas, Zhi-Qiang Zou, Virginia W. Sykes, Yawen Chen, William A. Blattner, Kathleen Pirollo & Esther H. Chang

993 The promoter of the human cystic fibrosis transmembrane conductance regulator gene directing SV40 T antigen expression induces malignant proliferation of ependymal cells in transgenic mice
Frédéric Perraud, Kunihiko Yoshimura, Bernard Louis, Wilfried Dalemans, Dalila Ali-Hadji, Huguette Schultz, Marie-Christine Claudepierre, Cécile Chartier, Claire Danel, Jean-Pierre Bellocq, Ronald G. Crystal, Jean-Pierre Lecocq & Andrea Pavirani

999 Phosphorylation of connexin43 in cells containing mutant *src* oncogenes
David S. Crow, Wendy E. Kurata & Alan F. Lau

1005 A highly conserved cysteine in the v-Myb DNA-binding domain is essential for transformation and transcriptional *trans*-activation
Friedrich A. Grässer, Kenneth LaMontagne, Linda Whittaker, Susanne Stohr & Joseph S. Lipsick

1011 Selective ability of S-phase cell extracts to dephosphorylate SV40 large T antigen *in vitro*
John W. Ludlow

1015 Mutations of the p53 gene in human myeloma cell lines
Georges-Raoul Mazars, Marielle Portier, Xue-Guang Zhang, Michel Jourdan, Regis Bataille, Charles Theillet & Bernard Klein

1019 Analysis of gene amplification in archival tissue by differential polymerase chain reaction
Andreas Neubauer, Beatrix Neubauer, Mei He, Peter Effert, Dirk Iglehart, Roy A. Frye & Edison Liu

1027 The *HER2* (c-*erbB*-2) oncogene is frequently amplified in *in situ* carcinomas of the breast
Edison Liu, Ann Thor, Mei He, Maurice Barcos, Britt-Marie Ljung & Christopher Benz

1033 A recombinant cell line, expressing a form of the Y13-259 anti-$p21^{ras}$ antibody which binds protein A and may be produced as ascites
Thomas M. Werge, Andrew Bradbury, Anna Di Luzio & Antonino Cattaneo

1037 The regulation of translation by the 5′ untranslated region of *Xenopus* c-*myc* I mRNA during early development
Philip Lazarus

1043 No evidence for germline mutations in exons 5–9 of the p53 gene in 25 breast cancer families
W. Warren, R.A. Eeles, B.A.J. Ponder, D.F. Easton, D. Averill, M.A. Ponder, K. Anderson, A. Evans, R. DeMars, R. Love, S. Dundas, M. Stratton, P. Trowbridge, C.S. Cooper & J. Peto

1047 Erratum
Thorn et al.

Volume 7, No. 6 June 1992

1051 The N-terminal and C-terminal domains of a receptor tyrosine phosphatase are associated by non-covalent linkage
Q. Yu, T. Lenardo & R.A. Weinberg

1059 Frequent loss of heterozygosity on chromosome 18 in ovarian adenocarcinoma which does not always include the DCC locus
G. Chenevix-Trench, J. Leary, J. Kerr, J. Michel, R. Kefford, T. Hurst, P.G. Parsons, M. Friedlander & S.K. Khoo

1067 cdc2-like kinase is associated with the retinoblastoma protein
Masatoshi Kitagawa, Shio Saitoh, Hidetoshi Ogino, Takayoshi Okabe, Hidemi Matsumoto, Akira Okuyama, Katsuyuki Tamai, Yoshiki Ohba, Hideyo Yasuda, Susumu Nishimura & Yoichi Taya

1075 Complexes containing the retinoblastoma gene product recognize different DNA motifs related to the E2F binding site
Michel M. Ouellette, Jun Chen, Woodring E. Wright & Jerry W. Shay

1083 Alternative splicing of PML transcripts predicts coexpression of several carboxy-terminally different protein isoforms
M. Fagioli, M. Alcalay, P.P. Pandolfi, L. Venturini, A. Mencarelli, A. Simeone, D. Acampora, F. Grignani & P.G. Pelicci

1093 Identification of the testis c-*mos* promoter: specific activity in a seminiferous tubule-derived extract and binding of a testis-specific nuclear factor
Frans A. van der Hoorn

1101 Analysis of phosphotyrosine-containing proteins present in v-*src*-infected myeloid progenitor cells
James L. Erwin & Steven M. Anderson

1109 An antisense interferon-β RNA abolishes repression of c-*fos* gene expression
C. Lallemand, A. Kahan, L. Telvi, A.M. Joret & J. Gerfaux

1119 Transformation by Jun: requirement for leucine zipper, basic region and transactivation domain and enhancement by Fos
Iain M. Morgan, Lynn J. Ransone, Timothy J. Bos, Inder M. Verma & Peter K. Vogt

1127 Transfection of activated c-H-*ras*^{EJ}/pSV2neo or pSV2neo genes into rat mammary cells: rapid stimulation of clonal diversification of spontaneous metastatic and cell-surface properties
Garth L. Nicolson, Gary E. Gallick, William H. Spohn, Thomas M. Lembo & Michael A. Tainsky

1137 Mutations in the *rel*-homology domain alter the biochemical properties of v-*rel* and render it transformation defective in chicken embryo fibroblasts
Laurel E. Morrison, Guido Boehmelt & Paula J. Enrietto

1149 Evidence for non-covalent clusters of the c-*met* proto-oncogene product
Donna L. Faletto, Ilan Tsarfaty, Thomas E. Kmiecik, Mary Gonzatti, Toshimitsu Suzuki & George F. Vande Woude

1159 High frequency of p53 gene alterations associated with protein overexpression in human squamous cell carcinoma of the larynx
R. Maestro, R. Dolcetti, D. Gasparotto, C. Doglioni, S. Pelucchi, L. Barzan, E. Grandi & M. Boiocchi

1167 T-antigen mutant activities *in vivo*: roles of p53 and pRB binding in tumorigenesis of the choroid plexus
Jiandong Chen, Gregory J. Tobin, James M. Pipas & Terry Van Dyke

1177 Angiogenic activity of the K-*fgf*/*hst* oncogene in neural transplants
Oliver Brüstle, Adriano Aguzzi, Daniela Talarico, Claudio Basilico, Paul Kleihues & Otmar D. Wiestler

1185 Deletion mapping of chromosomes 14q and 1p in human neuroblastoma
Hisashi Takayama, Takashi Suzuki, Hideo Mugishima, Takahito Fujisawa, Masahiko Ookuni, Manfred Schwab, Manuela Gehring, Yusuke Nakamura, Takashi Sugimura, Masaaki Terada & Jun Yokota

1191 Generation and characterization of transforming variants of the *lck* tyrosine protein kinase
Haskell T. Adler & Bartholomew M. Sefton

1201 Identification and analysis of the *ret* proto-oncogene promoter region in neuroblastoma cell lines and medullary thyroid carcinomas from MEN2A patients
Fumio Itoh, Yukihito Ishizaka, Tomoko Tahira, Masayuki Yamamoto, Akihiro Miya, Kohzoh Imai, Akira Yachi, Shinichiro Takai, Takashi Sugimura & Minako Nagao

1207 Cloning and characterization of a thermolabile v-*src* gene for use in reversible transformation of mammalian cells
Anna C. Maroney, Sajjad A. Qureshi, David A. Foster & Joan S. Brugge

1215 Intragenic homozygous deletion of the *WT1* gene in Wilms' tumor
Keiko Tadokoro, Hanako Fujii, Akira Ohshima, Yoshihiro Kakizawa, Kohichi Shimizu, Akira Sakai, Kenichi Sumiyoshi, Tadashi Inoue, Yasuhide Hayashi & Masao Yamada

1223 Occurrence of distinct *PML–RAR-α* fusion gene isoforms in patients with acute promyelocytic leukemia detected by reverse transcriptase/ polymerase chain reaction
Sai-Juan Chen, Zhu Chen, Alex Chen, Jian-Hua Tong, Shuo Dong, Zhen-Yi Wang, Samuel Waxman & Arthur Zelent

1233 Transcriptional activation of the c-*myc* gene by the c-*myb* and B-*myb* gene products
Hideki Nakagoshi, Chie Kanei-Ishii, Tetsuya Sawazaki, Gaku Mizuguchi & Shunsuke Ishii

1241 Functional homology between N-*myc* and c-*myc* in murine plasmacytomagenesis: plasmacytoma development in N-*myc* transgenic mice
Yisong Wang, Hiroyuki Sugiyama, Håkan Axelson, Chinmay K. Panda, Magdalena Babonits, Averil Ma, James M. Steinberg, Frederic W. Alt, George Klein & Francis Wiener

1249 Mapping of *MAX* to human chromosome 14 and mouse chromosome 12 by *in situ* hybridization
Aileen D. Gilladoga, Susanne Edelhoff, Elizabeth M. Blackwood, Robert N. Eisenman & Christine M. Disteche

Volume 7, No. 7 July 1992

1255 Adenovirus E1a as a tumor-suppressor gene
G. Chinnadurai

1259 Cloning and structural analysis of the human c-*kit* gene
George R. Vandenbark, Carlos M. deCastro, Howard Taylor, Susan Dew-Knight & Russel E. Kaufman

1267 Two antisense promoters in the immunoglobulin μ-switch region drive expression of c-*myc* in the Burkitt's lymphoma cell line BL67
Thomas W. Apel, Josef Mautner, Axel Polack, George W. Bornkamm & Dirk Eick

1273 Expression of the c-*erb* B-3 protein in normal human adult and fetal tissues
S.A. Prigent, N.R. Lemoine, C.M. Hughes, G.D. Plowman, C. Selden & W.J. Gullick

1279 The *ras* and protein kinase A pathways are mutually antagonistic in regulating rat prolactin promoter activity
Kerry E. Conrad & Arthur Gutierrez-Hartmann

1287 The murine *ufo* receptor: molecular cloning, chromosomal localization and *in situ* expression analysis
Michael Faust, Cecilia Ebensperger, Ansgar S. Schulz, Lothar Schleithoff, Horst Hameister, Claus R. Bartram & Johannes W.G. Janssen

1295 Characterization of the mammary hyperplasia, dysplasia and neoplasia induced in athymic female adult mice by polyomavirus
Sandra Z. Haslam, Julia J. Wirth, Laura J. Counterman & Michele M. Fluck

1305 Dependence of SV40 large T-antigen cell cycle regulation on T-antigen expression levels
Todd L. Sladek & James W. Jacobberger

1315 Quail neuroretina c-R*mil* (B-*raf*) proto-oncogene cDNAs encode two proteins of 93.5 and 95 kDa resulting from alternative splicing
Alain Eychène, Jean Vianney Barnier, Philippe Dézélée, Maria Marx, Danielle Laugier, Irini Calogeraki & Georges Calothy

1325 Genomic organization of the putative human homeobox proto-oncogene HOX-11 (TCL-3) and its endogenous expression in T cells
Ming Lu, Nan Zhang & Anthony D. Ho

1331 Detection of the PTC/*ret*^{TPC} oncogene in human thyroid cancers
Sissy M. Jhiang, Daniel R. Caruso, Edward Gilmore, Yukihito Ishizaka, Tomoko Tahira, Minako Nagao, Ing-Ming Chiu & Ernest L. Mazzaferri

1339 *erb*B-2 autophosphorylation is required for mitogenic action and high-affinity substrate coupling
Oreste Segatto, Fulvio Lonardo, Kristian Helin, Daniel Wexler, Francesca Fazioli, Suh Goo Rhee & Pier Paolo Di Fiore

1347 JAK2, a third member of the JAK family of protein tyrosine kinases
Ailsa G. Harpur, Anne-Catherine Andres, Andrew Ziemiecki, Raja R. Aston & Andrew F. Wilks

1355 Demonstration of an activated platelet-derived growth factor autocrine pathway and its role in human tumor cell proliferation *in vitro*
Timothy P. Fleming, Toshimitsu Matsui, Mohammad A. Heidaran, Christopher J. Molloy, Jennifer Artrip & Stuart. A. Aaronson

1361 Phosphorylation of the p53 tumor-suppressor protein at three N-terminal sites by a novel casein kinase I-like enzyme
Diane M. Milne, Ruth H. Palmer, David G. Campbell & David W. Meek

1371 Correlation between the conformational phenotype of p53 and its subcellular location
Jens Zerrahn, Wolfgang Deppert, Doris Weidermann, Tilo Patschinsky, Frances Richards & Jo Milner

1383 Evidence for synergistic interactions between *ras*, *myc* and a mutant form of p53 in cellular transformation and tumor dissemination
William R. Taylor, Sean E. Egan, Michael Mowat, Arnold H. Greenberg & Jim A. Wright

1391 Clonal characteristics of acute lymphoblastic cells derived from BCR/ABL p190 transgenic mice
S.D. Griffiths, L.E. Healy, A.M. Ford, C.A. Bennett, J.W. Voncken, N. Heisterkamp, J. Groffen & M.F. Greaves

1401 Gene rearrangement and overexpression of PRAD1 in lymphoid malignancy with t(11;14) (q13;q132) translocation
Masao Seto, Kazuhito Yamamoto, Shinsuke Iida, Yukihiro Akao, Kazuhiko R. Utsumi, Ichiro Kubonishi, Isao Miyoshi, Takemi Ohtsuki, Yoshihito Yawata, Masayoshi Namba, Toru Motokura, Andrew Arnold, Toshida Takahashi & Ryuzo Ueda

1407 Differences in GTPase-activating protein activity between liver tumors and normal liver tissue in mice
Oliver Müller, Matthias Frech, Petra Gideon, Alfred Wittinghofer & Michael Schwarz

1413 Diet-dependent carcinogenesis of pancreatic islets and liver in transgenic mice expressing oncogenes under the control of the L-type pyruvate kinase gene promoter
Nathalie Cartier, Lucile Miquerol, Micheline Tulliez, Nathalie Lepetit, Francois Levrat, Gisèle Grimber, Pascale Briand & Axel Kahn

1423 Structural organization of the murine c-*kit* proto-oncogene
E. Gokkel, Z. Grossman, B. Ramot, Y. Yarden, G. Rechavi & D. Givol

1431 RNA polymerase chain reaction detects different levels of four alternatively spliced *WT1* transcripts in Wilms' tumors
Birgit Brenner, Gabi Wildhardt, Susanne Schneider & Brigitte Royer-Pokora

1435 Phylogeny of the p68$^{c\text{-}ets\text{-}1}$ amino-terminal transactivating domain reveals some highly conserved structural features
Oliver Albagli, Anne Flourens, Pascale Crepieux, Agnès Begue, Dominique Stehelin & Dominique Leprince

1441 Detection of phosphorylated *ret*^{TPC} oncogene product in cytoplasm
Yukihito Ishizaka, Hiroshi Shima, Takashi Sugimura & Minako Nagao

1445 Detection of heterozygous mutations in the RB1 gene in retinoblastoma patients using single-strand conformation polymorphism analysis and polymerase chain reaction sequencing
Annette Hogg, Zerrin Onadim, Paul N. Baird & John K. Cowell

1453 Incorporation of BrdU in a DNA fragment may affect protein–DNA interactions in a site-dependent manner
Gyanendra Kumar, Arun K. Sharma & Krishna Jayaraman

1457 Erratum
Givol et al.

1459 Erratum
Green et al.

Volume 7, No. 8 August 1992

1463 A high proportion of early response genes are constitutively activated in T cells by HTLV-I
Kathleen Kelly, Paula Davis, Hiroaki Mitsuya, Steven Irving, John Wright, Ralph Grassmann, Bernhard Fleckenstein, Yuji Wano, Warner Greene & Ulrich Siebenlist

1471 *tek*, a novel tyrosine kinase gene located on mouse chromosome 4, is expressed in endothelial cells and their presumptive precursors
Daniel J. Dumont, Terry P. Yamaguchi, Ronald, A. Conlon, Janet Rossant & Martin L. Breitman

1481 c-Ha-*ras* gene mutation and activation precede pathological changes in DMBA-induced *in vivo* carcinogenesis
Yvonne Y. Kwong, Zaheed Husain & Debajit K. Biswas

1491 Establishment and characterization of a malignant melanocytic tumor cell line expressing the *ret* oncogene
Masahiko Taniguchi, Takashi Iwamoto, Izumi Nakashima, Atsuo Nakayama, Masaharu Ohbayashi, Mutsushi Matsuyama & Masahide Takahashi

1497 A novel sequence in the type IV collagen promoter binds nuclear proteins from Engelbreth – Holm – Swarm tumor
L.A. Bruggeman, P.D. Burbelo, Y. Yamada & P.E. Klotman

1503 Human pancreatic carcinomas and cell lines reveal frequent and multiple alterations in the p53 and Rb-1 tumor-suppressor genes
B. Ruggeri, S.-Y. Zhang, J. Caamano, M. DiRado, S.D. Flynn & A.J.P. Klein-Szanto

1513 A C-Terminal α-helix plus basic region motif is the major structural determinant of p53 tetramerization
Horst-Werner Stürzbecher, Ruth Brain, Christine Addison, Karran Rudge, Maido Remm, Margaret Grimaldi, Elizabeth Keenan & John R. Jenkins

1525 The HIV *tat* gene transforms human keratinocytes
Chang-Min Kim, Jonathan Vogel, Gilbert Jay & Johng S. Rhim

1531 v-Myc, but not Max, possesses domains that function in both transcription activation and cellular transformation
Soyoung Min & Elizabeth J. Taparowsky

1541 Functional interaction of p53 with HPV18 E6, c-*myc* and H-*ras* in 3T3 cells
Tzer-Ming Chen & Vittorio Defendi

1549 Loss of transforming growth factor β1 (TGF-β1)-induced growth arrest and $p34^{cdc2}$ regulation in *ras*-transfection epithelial cells
Maureen Longstreet, Beth Miller & Philip. H. Howe

1557 Co-amplification of transcriptionally active epidermal growth factor receptor and ribosomal genes in the human hepatoma cell line Li7A
C. Saint-Ruf, E. Viegas-Péquignot, E. Alfani, M. Clementi, B. Dutrillaux & G. Carloni

1567 Mouse platelet-derived growth factor α receptor: sequence, tissue-specific expression and correlation with metastatic phenotype
Myoung-Sool Do, Cheryl Fitzer-Attas, John Gubbay, Lea Greenfeld, Michael Feldman & Lea Eisenbach

1577 Phosphorylation and regulatory effects of the carboxy terminus of a *Drosophila src* homolog
Steven J. Kussick & Jonathan A. Cooper

1587 Mechanism of estrogen activation of c-*myc* oncogene expression
Don Dubik & Robert P.C. Shiu

1595 Isolation of chromosome-specific DNA sequences from an Alu polymerase chain reaction library to define the breakpoint in a patient with a constitutional translocation t(1;13)(q22;q12) and ganglioneuroblastoma
Antony J. Michalski, Finbarr E. Cotter & John K. Cowell

1603 Large-scale molecular mapping of human c-*myb* locus: c-*myb* proto-oncogene is not involved in $6q^-$ abnormalities of lymphoid tumors
Jong-Gu Park & E. Premkumar Reddy

1611 Slow time-dependent cellular transformation induced at restrictive temperature by ts-*src* mutants
Thérèse David-Pfeuty & Yolande Nouvian-Dooghe

1625 Multiple *src*-related kinase genes, *srk*1 – 4, in the fresh water sponge *Spongilla lacustris*
Sabine Ottilie, Friedrich Raulf, Angelika Barnekow, Gerhard Hanning & Manfred Schartl

1631 Deletion mapping of chromosome 3p in female genital tract malignancies using microsatellite polymorphisms
Michael H. Jones & Yusuke Nakamura

1635 Human wild-type p53 adopts a unique conformational and phosphorylation state *in vivo* during growth arrest of glioblastoma cells
Stephen J. Ullrich, W. Edward Mercer & Ettore Appella

1645 Altered conformation of the p53 protein in myeloid leukemia cells and mitogen-stimulated normal blood cells
Wei Zhang, Guiying Hu, Elihu Estey, Jeane Hester & Albert Deisseroth

1649 The conformational change of a murine temperature-sensitive p53 protein is independent of a change in phosphorylation status
S.M. Picksley, D.W. Meek & D.P. Lane

1653 Modification of cyclin A expression by hepatitus B virus DNA integration in a hepatocellular carcinoma
Jian Wang, Frédérique Zindy, Xavier Chenivesse, Eugénia Lamas, Berthold Henglein & Christian Bréchot

1657 Chromosomal assignment of two human B-*rat* (R*mil*) proto-oncogene loci: B-*raf*-1 encoding the $p94^{Braf/Rmil}$ and B-*raf*-2, a processed pseudogene
Alain Eychène, Jean Vianney Barnier, Françoise Apiou, Bernard Dutrillaux & Georges Calothy

1661 Modifications of cell cycle controlling nuclear proteins by transforming growth factor β in the HaCaT keratinocyte cell line
Yosef Landesman, Michele Pagano, Giulio Draetta, Varda Rotter, Norbert E. Fusenig & Adi Kimchi

1667 Tumorigenic effects mediated in the avian embryo by one or more oncogenes associated with v-*myc*
A.E. Al Moustafa, B. Quantannens, F. Dieterlen-Lièvre & S. Saule

Volume 7, No. 9 September 1992

1673 Biochemical properties of the growth suppressor/oncoprotein p53
Mathias Montenarh

1681 Binding of the human E2F transcription factor to the retinoblastoma protein but not to cyclin A is abolished in HPV-16-immortalized cells
Michele Pagano, Matthias Dürst, Silvia Joswig, Giulio Draetta & Pidder Jansen-Dürr

1687 Reversion of middle T antigen-transformed Rat-2 cells by *Krev-1*: implications for the role of $p21^{c\text{-}ras}$ in polyomavirus-mediated transformation
Mary Anne Jelinek & John A. Hassell

1699 The functional domain of the stimulatory GDP/GTP exchange protein (*smg* GDS) which interacts with the C-terminal geranylgeranylated region of *rap*1/K*rev*1/*smg* p21
Kei Kotani, Akira Kikuchi, Kentaro Doi, Shosei Kishida, Tsuyoshi Sakoda, Kiyohiko Kishi & Yoshimi Takai

1705 *smg*/*rap*1/K*rev*-1 p21s inhibit the signal pathway to the c-*fos* promoter/enhancer from c-Ki-*ras* p21 but not from c-*raf*-1 kinase in NIH3T3 cells
Tsuyoshi Sakoda, Kozo Kaibuchi, Kiyohiko Kishi, Shosei Kishida, Kentaro Doi, Masato Hoshino, Seisuke Hattori & Yoshimi Takai

1713 Genomic dispersal of the *ets* gene family during metazoan evolution
James A. Lautenberger, Laura A. Burdett, Mark A. Gunnell, Shengmei Qi, Dennis K. Watson, Stephen J. O'Brien & Takis S. Papas

1721 Characterization of a paired box- and homeobox-containing quail gene (*Pax-QNR*) expressed in the neuroretina
Patrick Martin, Catherine Carriere, Christine Dozier, Brigitte Quatannens, Marie-Anne Mirabel, Bernard Vandenbunder, Dominique Stehelin & Simon Saule

1729 Mapping of UV photoproducts within *ras* protooncogenes in UV-irradiated cells: correlation with mutations in human skin cancer
Vuokko T. Törmänen & Gerd P. Pfeifer

1737 Transcriptional activator Tax of HTLV-1 binds to the NF-κB precursor p105
H. Hirai, J. Fujisawa, T. Suzuki, K. Ueda, M. Muramatsu, A. Tsuboi, N. Arai & M. Yoshida

1743 Functional analysis of the N-terminal domain of Tat protein of the human immunodeficiency virus type 1
M.V. Ramana Reddy, Madhurai Desai, Janet Jeyapaul, D.D.K. Prasad, Thikkavarapu Seshamma, Diana Palmeri & Shabbir A. Khan

1749 Activation of interleukin-2 receptor alpha expression by extracellular HTLV-I Tax protein: a potential role in HTLV-I pathogenesis
Susan J. Marriott, Dorothy Trinh & John N. Brady

1757 Evidence for interaction between v-Mos and a $p34^{cdc2}$ isoform, $p35^{cdk}$
Wenlong Bai, Balraj Singh, Yandan Yang & Ralph B. Arlinghaus

1765 Modulation of *myb* gene expression in sponges by retinoic acid
Hans K. Biesalski, Gudrun Doepner, Georg Tzimas, Vera Gamulin, Heinz. C. Schröder, Renato Batel, Heinz Nau & Werner E.G. Müller

1775 Transient expression of the Epstein–Barr virus *LMP1* gene in human primary B cells induces cellular activation and DNA synthesis
Marc Peng & Erik Lundgren

1783 Max and c-Myc/Max DNA-binding activities in cell extracts
Trevor D. Littlewood, Bruno Amati, Hartmut Land & Gerard I. Evan

1793 Rapid, complete and reversible transformation by v-*sis* precedes irreversible transformation
Dan Mercola, Philip M. Carpenter, Amita Grover-Bardwick & M. Mercola

1805 The binding of transcription factor Sp1 to multiple sites is required for maximal expression from the rat transforming growth factor α promoter
Xiaorong Chen, Jane C. Azizkhan & David C. Lee

1817 Multiple mechanisms of regulation of the human c-*myb* gene during myelomonocytic differentiation
L.H. Boise, K.M. Gorse & E.H. Westin

1827 Constitutive expression of exogenous *myc* in myelomonocytic cells: acquisition of a more transformed phenotype and inhibition of differentiation induction
Orin Chisholm, Paula Stapleton & Geoff Symonds

1837 Retinoic acid receptor α suppresses polyomavirus transformation and c-*fos* expression in rat fibroblasts
David A. Talmage & Roy S. Lackey

1847 *In vivo* footprints between the murine c-*myc* P1 and P2 promoters
A. Plet, N. Tourkine, N. Mechti, P. Jeanteur & J.-M. Blanchard

1756 Expression of the normal p53 gene induces differentiation of K562 cells
Elena Feinstein, Robert P. Gale, John Reed & Eli Canaani

1859 Transformation mediated by the human *HER*-2 gene independent of the epidermal growth factor receptor
Victoria R. Chazin, Michael Kaleko, A. Dusty Miller & Dennis J. Slamon

1867 Ras controls coupling of growth factor receptors and protein kinase C in the membrane to Raf-1 and B-Raf protein serine kinases in the cytosol
Jakob Troppmair, Joseph T. Bruder, Harald App, Hong Cai, Lauren Liptak, József Szeberényi, Geoffrey M. Cooper & Ulf R. Rapp

1875 Transcription of BPV-1 genes in transfected F9 cells
Barbara Steuer, Hubert Stöppler, Beate Breuer & Angel Alonso

1879 Lack of expression of tumour-suppressor genes in human malignant glioma cell lines
Roseline Godbout, Junji Miyakoshi, Kelly D. Dobler, Randy Andison, Koichi Matsuo, M.J. Allalunis-Turner, Hiraku Takebe & Rufus S. Day III

1855 Characterization and cell cycle-regulated expression of mouse B-*myb*
E.W.-F. Lam, C. Robinson, & R.J. Watson

Volume 7, No. 10 October 1992

1893 Association of Fyn with the activated platelet-derived growth factor receptor: requirements for binding and phosphorylation
Geraldine M. Twamley, Robert M. Kypta, Belinda Hall & Sara A. Courtneidge

1903 The v-*ski* oncogene cooperates with the v-*sea* oncogene in erythroid transformation by blocking erythroid differentiation
Jennifer Larsen, Hartmut Beug & Michael J. Hayman

1913 Transformation of NIH3T3 cells by Rous sarcoma virus occurs with high efficiency in the absence of proviral rearrangements or amplification
Germana Falcone, Claudia Provenzano, Stefano Alemà & Franco Tatò

1921 Specific and complex interactions of murine p53 with DNA
Silke N. Weißker, Beate F. Müller, Angela Homfeld & Wolfgang Deppert

1933 Analysis of temperature-sensitive functions of Fos: lack of a correlation between transformation and TRE-dependent *trans*-activation
Karin Jooss & Rolf Müller

1941 Cloning and developmental expression in *Xenopus laevis* of seven additional members of the *Wnt* family
Sharon L. Wolda & Randall T. Moon

1949 Functional analysis of the SH2 and SH3 domains of the *lck* tyrosine protein kinase
Pamela J. Reynolds, Tamara R. Hurley & Bartholomew M. Sefton

1957 Promoter region of the murine fibroblast growth factor receptor 2 (*bek*/KGFR) gene
A. Avivi, K. Skorecki, A. Yayon & D. Givol

1963 Mast cells sensitive to v-H-*ras* transformation are hyperinducible for interleukin 3 expression and have lost tumor-suppressor activity
Asha P.K. Nair, Hans H. Hirsch & Christoph Moroni

1973 Autophosphorylation promotes complex formation of recombinant hepatocyte growth factor receptor with cytoplasmic effectors containing *SH2* domains
Alberto Bardelli, Flavio Maina, Ivan Gout, Michael J. Fry, Michael D. Waterfield, Paolo M. Comoglio & Carola Ponzetto

1979 Separation of immortalization from tumor induction with polyoma large T mutants that fail to bind the retinoblastoma gene product
Robert Freund, Roderick T. Bronson & Thomas L. Benjamin

1989 p53 and chromosome 3 abnormalities, characteristic of malignant lung tumours, are detectable in preinvasive lesions of the bronchus
V. Sundaresan, P. Ganly, P. Hasleton, R. Rudd, G. Sinha, N.M. Bleehen & P. Rabbitts

1999 The c-*myb* proto-oncogene product binds to but does not activate the promoter of the DNA polymerase α gene
Tatsuhiko Sudo, Hiroshi Miyazawa, Fumio Hanaoka & Shunsuke Ishii

2007 First non-vertebrate member of the *myc* gene family is seasonally expressed in an invertebrate testis
Charles W. Walker, John D.G. Boom & Adam G. Marsh

2013 Suppression of tumorigenesis by the breast cancer cell line MCF-7 following transfer of a normal human chromosome 11
Massimo Negrini, Antonella Castagnoli, Silvia Sabbioni, Emilio Recanatini, Gloria Giovannini, Laura Possati, Eric. J. Stanbridge, Italo Nenci & Giuseppe Barbanti-Brodano

2019 Azatyrosine inhibits neurite outgrowth of PC12 cells induced by oncogenic Ras
Junko Fujita-Yoshigaki, Shigeyuki Yokoyama, Nobuko Shindo-Okada & Susumu Nishimura

2025 Characterization of an angiosarcoma-inducing mutation in the *erb*B oncogene
H.L. Robinson, S.E. Tracy, N. Nair, C., Taglienti-Sian & D.C. Gamett

2031 Cooperation between the H-*ras* oncogene and a truncated derivative of the v-*myb* oncogene in transformation of hamster embryo fibroblasts
Abderrahim Merzak, Yolande Dooghe, Martine Pironin, Bernard Perbal & Philippe Vigier

2041 Hyperplasia of mouse mammary epithelium induced by expression of the *Wnt-1* (*int-1*) oncogene in reconstituted mammary gland
Paul A.W. Edwards, Susan E. Hiby, Jackie Papkoff & Jane M. Bradbury

2053 Altered H_1 histamine receptor signaling in Balb/3T3 cells transformed by v-K-*ras* and v-H-*ras* oncogenes
Peter F. Blackmore, S. George Oakes & Kenneth D. Somers

2059 Sequence and expression of a murine cDNA encoding PC326, a novel gene expressed in plasmacytomas but not normal plasma cells
P. Leif Bergsagel, Cynthia R. Timblin, Laurel Eckhardt, Reuven Laskov & W. Michael Kuehl

2065 Evidence that activation of the Egr-1 promoter by v-Raf involves serum response elements
Myunghi Rim, Sajjad A. Quereshi, David Gius, Jaein Nho, Vikas P. Sukhatme & David A. Foster

2069 Early loss of heterozygosity on 17q in ovarian cancer
D.M. Eccles, S.E.H. Russell, N.E. Haites, The ABE Ovarian Cancer Genetics Group (R. Atkinson, D.W. Bell, L. Gruber, I. Hickey, K. Kelly, H. Kitchener, R. Leonard, A. Lessells, S. Lowry, I. Miller, B. Milner & M. Steel)

2073 Overexpression of the N-*ras* proto-oncogene, not somatic mutational activation, associated with malignant tumors in transgenic mice
Ramon Mangues, Irving Seidman, Jon W. Gordon & Angel Pellicer

2077 c-Jun causes focus formation and anchorage-independent growth in culture but is non-tumorigenic
Wing-Yen Wong, L. Sigve Håvarstein, Ian M. Morgan & Peter K. Vogt

2081 A retroviral sequence of the Chinese hamster ovary cell line
Wei Zhu, Marina Kriajevskaia & Wen-Gang Chou

2085 Mutational analysis of Max: role of basic, helix – loop – helix/leucine zipper domains in DNA binding, dimerization and regulation of Myc-mediated transcriptional activation
C. Damodara Reddy, Purandar Dasgupta, P. Saikumar, Henryk Dudek, F.J. Rauscher III & E. Premkumar Reddy

Volume 7, No. 11 November 1992

2095 Identification of complex formation between two intracellular tyrosine kinase substrates: Human c-Rel and the p105 precursor of p50 NF-κB
Manfred Neumann, Kathy Tsapos, Judith A. Scheppler, Janet Ross & B. Robert Franza, Jr.

2105 Role of Ras in signal transduction from the nerve growth factor receptor: relationship to protein kinase C, calcium and cyclic AMP
József Szeberényi, Péter Erhardt, Hong Cai & Geoffrey M. Cooper

2115 Multiple intragenic elements regulate the expression of the murine N-*ras* gene
Michael Jeffers & Angel Pellicer

2125 HTLV-I and HTLV-II tax *trans*-activate the human EGR-1 promoter through different *cis*-acting sequences
Kathleen M. Sakamoto, Stephen, D. Nimer, Joseph D. Rosenblatt & Judith C. Gasson

2131 Cloning and characterization of the latent membrane protein (LMP) of a specific Epstein–Barr virus variant derived from the nasopharyngeal carcinoma in the Taiwanese population
Mong-Liang Chen, Chi-Neu Tsai, Chih-Lung Liang, Chih-Hung Shu, Chiu-Rong Huang, Dov Sulitizeanu, Shih-Tung Liu & Yu-Sun Chang

2141 Identification of mutations in the *WT1* gene in tumours from patients with the WAGR syndrome
Paul N. Baird, Natalie Groves, Daniel A. Haber, David E. Housman & John K. Cowell

2151 Catalytic properties, tissue and intracellular distribution of neurofibromin
Mladen Golubić, Margaret Roudebush, Steven Dobrowolski, Alan Wolfman & Dennis W. Stacey

2161 p53 mutations in Raji cells: characterization and localization relative to other Burkitt's lymphomas
A. Duthu, B. Debuire, J. Romano, J.C. Ehrhart, M. Fiscella, E. May, E. Appella & P. May

2169 p53 mosaicism with an exon 8 germline mutation in the founder of a cancer-prone pedigree
Heinrich Kovar, Andrea Auinger, Gunhild Jug, Thomas Müller & Konrad Pillwein

2175 Transgenes encoding mutant simian virus 40 large T antigens unmask phenotypic and functional constraints in thymic epithelial cells
Juergen Moll, Hermann Eibel, Florence Botteri, Gilles Sansig, Catherine Regnier & Herman van der Putten

2189 Identification of the product of two oncogenic rearranged forms of the *RET* proto-oncogene in papillary thyroid carcinomas
C. Lanzi, M.G. Borrello, I. Bongarzone, A. Migliazza, A. Fusco, M. Grieco, M. Santoro, R.A. Gambetta, F. Zunino, G. Della Porta & M.A. Pierotti

2195 Met and hepatocyte growth factor/scatter factor signal transduction in normal melanocytes and melanoma cells
Ruth Halaban, Jeffrey S. Rubin, Yoko Funasaka, Melanie Cobb, Teri Boulton, Donna Faletto, Eliot Rosen, Andrew Chan, Karen Yoko, Wain White, Christopher Cook & Gisela Moellmann

2207 Organization and nucleotide sequence of the human *KIT* (mast/stem cell growth factor receptor) proto-oncogene
Lutz B. Giebel, Kathleen M. Strunk, Stuart A. Holmes & Richard A. Spritz

2219 Both myeloproliferative disease and leukemia are induced by transplantation of bone marrow cells expressing v-*myc*
Lynn Bonham, Karen MacKenzie, Steven Wood, Peter B. Rowe & Geoff Symonds

2231 The various domains of v-*myb* and v-*ets* oncogenes of E26 retrovirus contribute differently, but cooperatively, in transformation of hematopoietic lineages
C. Domenget, D. Leprince, B. Pain, S. Peyrol, R.P. Li, D. Stehelin, J. Samarut & P. Jurdic

2243 The insulin-like growth factor 1 receptor is required for the proliferation of hemopoietic cells
K. Reiss, P. Porcu, C. Sell, Z. Pietrzkowski & R. Baserga

2249 *PCTAIRE-1* and *PCTAIRE-3*, two members of a novel *cdc2/CDC28*-related protein kinase gene family
Tsukasa Okuda, John L. Cleveland & James R. Downing

2259 Activation of the c-Raf protein kinase by protein kinase C phosphorylation
Osman Sözeri, Kerstin Vollmer, Marek Liyanage, David Frith, Gurdip Kour, George E. Mark III & Silvia Stabel

2263 Mechanisms of c-*erb*B2/*neu* oncogene-induced metastasis and repression of metastatic properties by adenovirus 5 E1A gene products
Dihua Yu, Jun-ichi Hamada, Hong Zhang, Garth L. Nicolson & Mien-Chie Hung

2271 AP-1 (Fos–Jun) regulation by IP-1: effect of signal transduction pathways and cell growth
Johan Auwerx & Paolo Sassone-Corsi

2281 Activation of Jun/AP-1 by protein kinase A
Rolf P. de Groot & Paolo Sassone-Corsi

2287 Differential induction of c-*fos* and c-*jun* proto-oncogenes and AP-1 activity by tumor promoter 12-*O*-tetradecanoyl phorbol 13-acetate in cells at different stages of tumor promotion *in vitro*
Wen-Sheng Wu, Jen-Kun Lin & Felicia Y.-H. Wu

2295 Identification and quantification of a carcinogen- induced molecular initiation event in cell transformation
H. Nakazawa, A.-M. Aguelon & H. Yamasaki

2303 Inhibition of the fibroblast growth factor receptor 1 (FGFR-1) gene in human melanocytes and malignant melanomas leads to inhibition of proliferation and signs indicative of differentiation
Dorothea Becker, Pauline L. Lee, Ulrich Rodeck & Meenhard Herlyn

2315 Malignant transformation of human melanocytes: induction of a complete melanoma phenotype and genotype
Anthony P. Albino, Gabriella Sozzi, David M. Nanus, Suresh C. Jhanwar & Alan N. Houghton

2323 Bone marrow-transforming activity of linker insertion mutants of Abelson murine leukemia virus
Peter Hevezi, Kimona Alin, Robert Rees-Jones & Stephen P. Goff

2329 The human *tpr* gene encodes a protein of 2094 amino acids that has extensive coiled-coil regions and an acidic C-terminal domain
Philip J. Mitchell & Colin S. Cooper

2335 *elk*-1 domains responsible for autonomous DNA binding, SRE:SRF interaction and negative regulation of DNA binding
Veena N. Rao & E. Shyam P. Reddy

2341 c-*fos* mRNA constitutive expression by mature human megakaryocytes
Béatrice Panterne, Jacques Hatzfeld, Jean-Marie Blanchard, Jean-Pierre Levesque, Rolande Berthier, Michèle Ginsbourg & Antoinette Hatzfeld

2345 Structural organization of a *src* gene from *Xenopus laevis*
Corine R. Ghosn, Barbara B.A. Ral, Sara T. Winokur, Thomas F. Unger & Robert E. Steele

2351 *In situ* dephosphorylation of p53 protein by calf intestinal alkaline phosphatase treatment
D.A. Baunoch, M. Xu, A. Tewari, J.K. Christman & M.A. Lane

2355 Polymerase chain reaction microanalysis of tumors from stained histological slides
Lynne Whetsell, Gilbert Maw, Nancy Nadon, David P. Ringer & Frederick V. Schaefer

2363 A possible role for c-Myc oncoproteins in post-transcriptional regulation of ribosomal RNA
A.W. Gibson, R. Ye, R.N. Johnston & L.W. Browder

Volume 7, No. 12 December1992

2371 Embryonic stem (ES) cells lacking functional c-*jun*: consequences for growth and differentiation, AP-1 activity and tumorigenicity
Frank Hilberg & Erwin F. Wagner

2381 Proviral insertions near cyclin D1 in mouse lymphomas: a parallel for BCL1 translocations in human B-cell neoplasms
G. Alistair Lammie, Rosalind Smith, Jonathan Silver, Sharon Brookes, Clive Dickson & Gordon Peters

2389 T-cell acute lymphoblastic lymphoma induced in transgenic mice by the RBTN1 and RBTN2 LIM-domain genes
P. Fisch, T. Boehm, I. Lavenir, T. Larson, J. Arno, A. Forster & T.H. Rabbitts

2399 Brain tumours and lymphomas in transgenic mice that carry HTLV-I LTR/c-*myc* and Ig/*tax* genes
Nissim Benvenisty, David M. Ornitz, Genevieve L. Bennett, Barbara G. Sahagan, Ann Kuo, Robert D. Cardiff & Philip Leder

2407 Platelet activation leads to increased c-*src* kinase activity and association of c-*src* with an 85-kDa tyrosine phosphoprotein
Sharon Wong, Albert B. Reynolds & Jackie Papkoff

2417 Intracellular targeting of $pp60^{src}$ expression: localization of v-*src* to adhesion plaques is sufficient to transform chicken embryo fibroblasts
Eric C. Liebl & G. Steven Martin

2429 Identification and characterization of a cytoskeleton-associated, epidermal growth factor sensitive $pp60^{c\text{-}src}$ substrate
Ming-Chei Maa, Linda K. Wilson, Julie S. Moyers, Richard R. Vines, J. Thomas Parsons & Sarah J. Parsons

2439 p120, a novel substrate of protein tyrosine kinase receptors and of $p60^{v\text{-}src}$, is related to cadherin-binding factors β-catenin, plakoglobin and *armadillo*
Albert B. Reynolds, Lily Herbert, John L. Cleveland, Sven T. Berg & James R. Gaut

2447 A novel NF-κB element within exon 1 of the murine c-*myc* gene
Dana J. Kessler, Douglas B. Spicer, Francis A. La Rosa & Gail E. Sonenshein

2455 c-*myc* and p53 gene expression in the differentiation of temperature-sensitive mutants of teratocarcinoma F9 cells
Mitsuko Kosaka, Souichi A. Iwai, Yukio Nishina, Tetsuro Sumi & Yoshitake Nishimune

2461 Overexpressed *Drosophila src* 64B is phosphorylated at its carboxy-terminal tyrosine, but is not catalytically repressed, in cultured *Drosophila* cells
Steven J. Kussick & Jonathan A. Cooper

2471 Molecular characterization and structural organization of *D-elg*, an *ets* proto-oncogene-related gene of *Drosophila*
Sian Min The, Xiaoling Xie, Fiona Smyth, Takis S. Papas, Dennis K. Watson & Robert A. Schulz

2479 Molecular cloning of a family of protein kinase genes expressed in the avian embryo
C. Marcelle & A. Eichmann

2489 Characterization of activated and normal mouse *Mos* gene in murine 3T3 cells
Richard S. Paules, James Resnick, Aisha B. Kasenally, Mary K. Ernst, Peter Donovan & George F. Vande Woude

2499 An Eph-related receptor protein tyrosine kinase gene segmentally expressed in the developing mouse hindbrain
Pascale Gilardi-Hebenstreit, M. Angela Nieto, Monique Frain, Marie-Geneviève Mattéi, Annick Chestier, David G. Wilkinson & Patrick Charnay

2507 Increased expression of the negative growth factor, galactoside-binding protein, gene in transformed thyroid cells and in human thyroid carcinomas
Lorenzo Chiariotti, Maria Teresa Berlingieri, Patrizia De Rosa, Caterina Battaglia, Nicole Berger, Carmelo B. Bruni & Alfredo Fusco

2513 DNA amplification at 11q13.5–q14 in human breast cancer
Pierre Szepetowski, Vincent Ollendorff, Josiane Grosgeorge, Anouk Courseaux, Daniel Birnbaum, Charles Theillet & Patrick Gaudray

2519 Rearrangement of the human *tre* oncogene by homologous recombination between Alu repeats of nucleotide sequences from two different chromosomes
Myriam Onno, Tatsuya Nakamura, Jana Hillova & Miroslav Hill

2525 Inactivation of the murine N-*ras* gene by gene targeting
Sylvaine Cases & François Dautry

2529 Physical mapping of human loci homologous to the chicken *nov* proto-oncogene
C. Martinerie, E. Viegas-Pequignot, I. Guenard, B. Dutrillaux, V.C. Nguyen, A. Bernheim & B. Perbal

2535 Alternative splicing in the human *lck* gene leads to the deletion of exon 1′ and results in a new type II *lck* transcript
Evelyne Rouer & Richard Benarous

2539 Identification of the cellular protein encoded by the human Wilms' tumor (*WT1*) gene
Adam Telerman, Huub Dodemont, Chantal Degraef, Paul Galand, Serge Bauwens, Patrick Van Oostveldt & Robert. B. Amson

2545 p53 and *RAS* gene mutations in multiple myeloma
Marielle Portier, Jean-Pierre Molès, Georges-Raoul Mazars, Philippe Jeanteur, Régis Bataille, Bernard Klein & Charles Theillet

2549 Overexpression of the c-*MET*/HGF receptor gene in human thyroid carcinomas
M.F. Di Renzo, M. Olivero, S. Ferro, M. Prat, I. Bongarzone, S. Pilotti, A. Belfiore, A. Costantino, R. Vigneri, M.A. Pierotti & P.M. Comoglio

2555 The amino acid sequence of a mammalian MAP kinase kinase
Alan Ashworth, Sara Nakielny, Philip Cohen & Chris Marshall

2557 Index

2563 Cumulative Contents

2575 Erratum
Michalski et al.